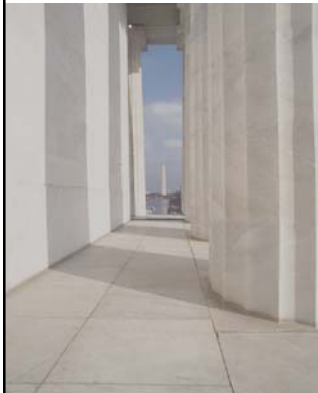**GSA** Energy Center of

Energy 2004 – Plug Into What's New

Mark Ewing
Director
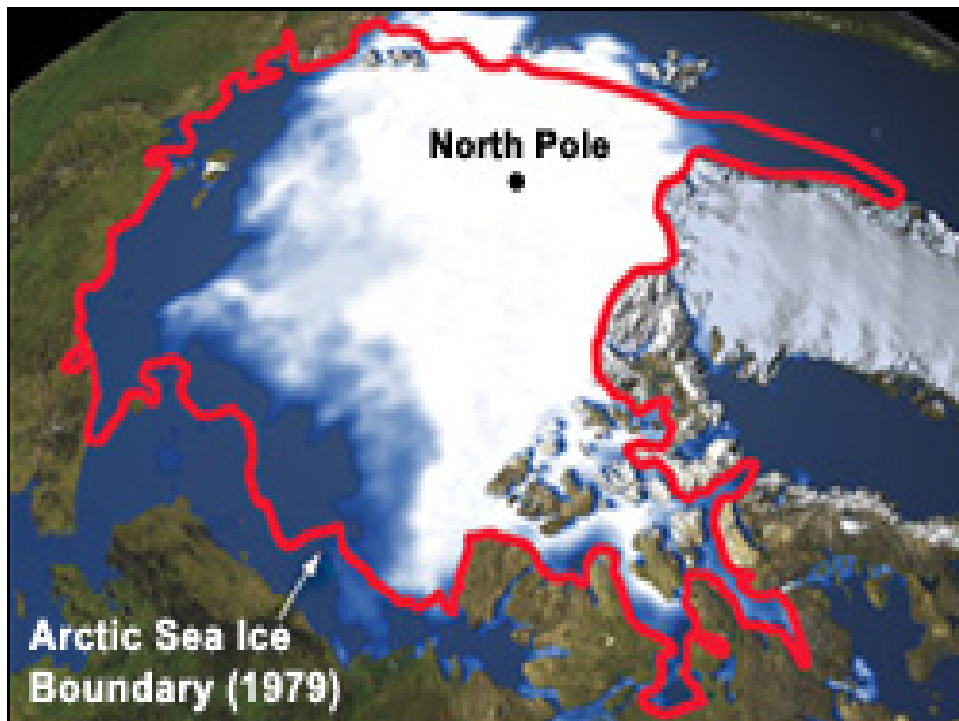Energy Center of Expertise

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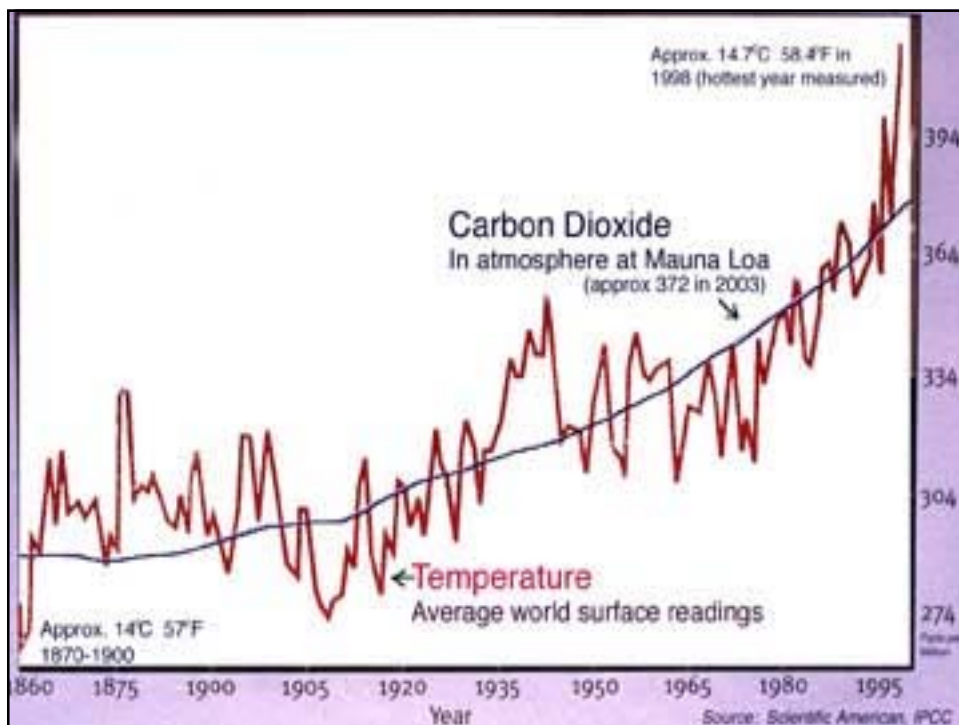**GSA** Energy Center of
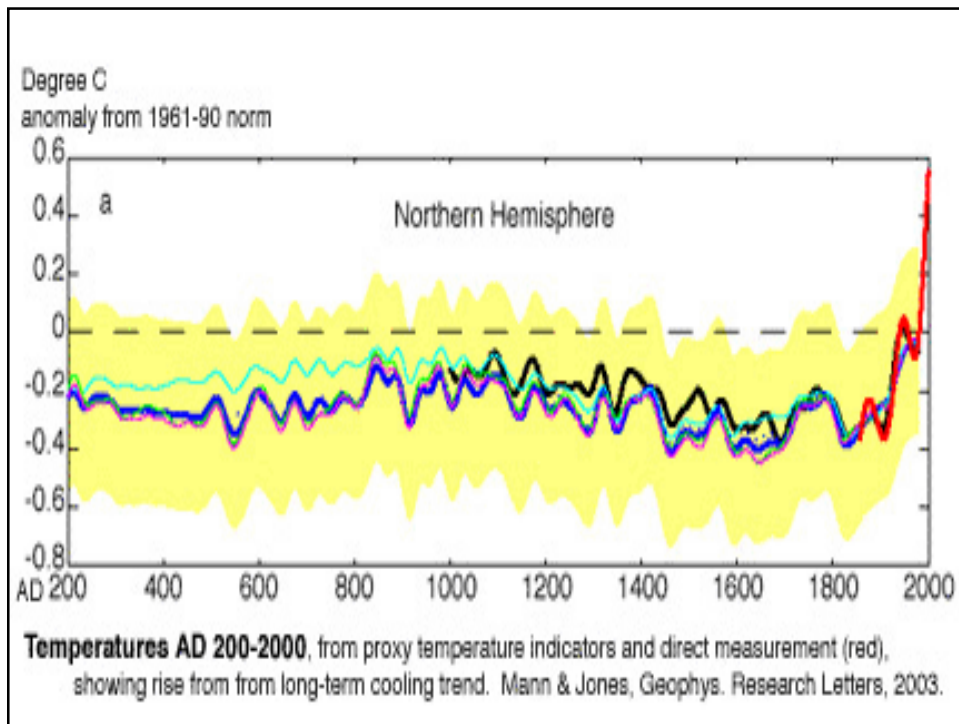Expertise

Overview

- Background
- Energy Center Products & Services – What's New
  - ✓ Public Utilities Program
  - ✓ Natural Gas Acquisition Program
  - ✓ Competitive Electricity
  - ✓ Renewable Power
  - ✓ Energy Continuity Planning
- Wrap Up

Background

- Why do we need to constantly upgrade our capabilities?
- When have we done enough?

North Pole

Arctic Sea Ice
Boundary (1979)

Chicago July 1995 · © Gary Braasch

Approx. 14.7°C 58.4°F in 1998 (hottest year measured)

Carbon Dioxide
In atmosphere at Mauna Loa
(approx 372 in 2003)

←Temperature
Average world surface readings

Approx. 14°C 57°F
1870-1900

394
364
334
304
274

Parts per billion

1860 1875 1900 1905 1920 1935 1950 1965 1980 1995
Year

Source: Scientific American, IPCC

Degree C
anomaly from 1961-90 norm

Northern Hemisphere

Temperatures AD 200-2000, from proxy temperature indicators and direct measurement (red), showing rise from from long-term cooling trend. Mann & Jones, Geophys. Research Letters, 2003.

Natural Gas Production, Consumption, and Imports, 1970 - 2025 (trillion cubic feet)

History

Projections

Consumption

Net Imports

23%

Production

Natural Gas Net Imports, 2001 and 2025
(trillion cubic feet)

2025

2001

Pipeline   Liquefied Natural Gas

Source: 2004 *Annual Energy Outlook*

4
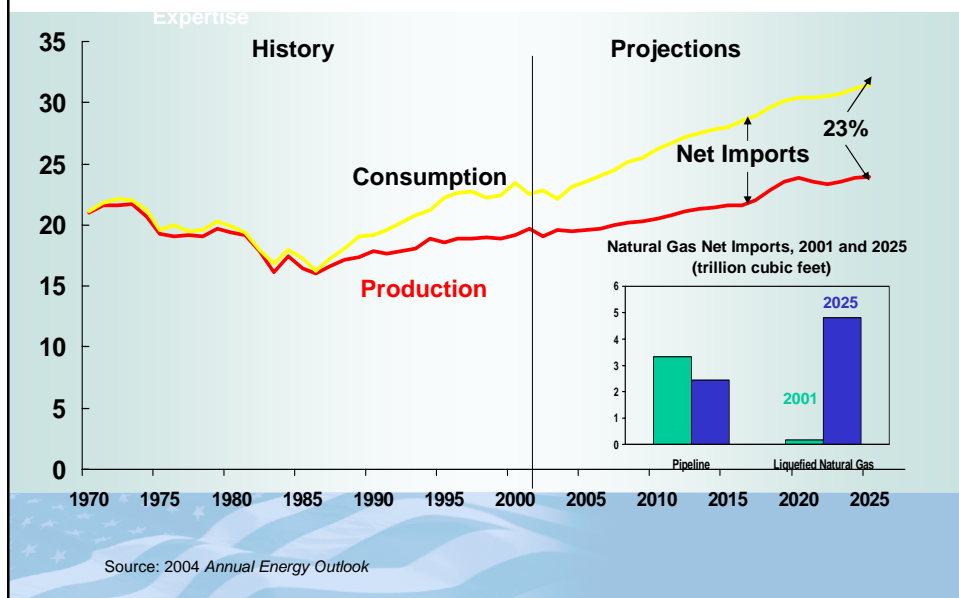
Energy-related Carbon Dioxide Emissions Are the Predominant Source of U.S. Greenhouse Gas Emissions

Other CO2
2%

Methane
9%

Nitrous Oxide
5%

Other Gases
2%

Energy-
Related CO2
82%
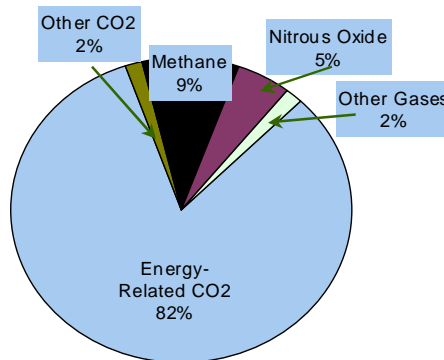
In 1990 energy-related CO2 was 79%, Other CO2 2%, Methane 12%, Nitrous Oxide 6% and Other Gases 1%

Source: EIA, *Emissions of Greenhouse Gases in the United States 2001*

www.eia.doe.gov
eia Energy Information
Administration

GSA

1) The measure must produce measureable energy or water reductions or measurable amounts of demand reduction:

Language may be included in negotiated Authorizations that secures guarantees of the energy and/or cost savings similar to that language commonly found in ESPCs. The method of savings guarantee can be as simple as using an engineering estimate of savings, however, savings must be measured and verified using the DOE M&V protocol.

✓ New definition of Demand Side Mana

✓ Measurement and Verification required

Natural Gas Acquisition

Each account is auctioned for both a baseload and indexed price

✓ New reverse auction bidd...
✓ New pricing strategy i... asing th... auctions - 150
✓ More contractors - 19
✓ More federal accounts - 318
✓ Total estimated decatherms under procurement – 11,053,550
✓ Total estimated dollar cost - $62,999,510

Competitive Electricity

✓ New PJM contract includes implicit demand response incentive
✓ Demand charges are based on each account's demand on the grid's peak summer days
✓ GSA will be alerting its PJM clients on anticipated peak summer days to shed/manage load (est. 10 days)

Renewable Power

- ✓ New Solicitation to purchase renewable energy
  - – REC indexed to a market pricing point
  - – GSA guarantees supplier receive fixed price for 10 years.
  - – Annual REC Price = Guaranteed Minimum Price – (PJM West all hours avg. price (or similar index) + capacity price (if any value)

Energy Security Planning

- ✓ New manual
- ✓ Upcoming workshops

GSA Energy Center of

Energy Center of Expertise Website

- http://www.gsa.gov/energy